

USSR/Chemical Technology - Chemical Products and Their H-2
Application. Elements. Oxides. Mineral Acids. Bases. Salts

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 1875

0.4-0.7 m/second. Optimal content of CaO in the circulating solutions is of 5-8 g/liter. With adequate specific volume of the towers the content of N oxides in the waste gases can be reduced to 0.1% by volume.

Communication I see RZhKhim, 1957, 63894.

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APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000722520018-4"

KIL'MAN, Ya. I.; KLEVKE, B.A.; GAMBURG, D.Yu.

Production and utilisation of liquid nitrogenous fertilizers.
Khim.prom. no.3:135-141 Ap-May '57. (MLRA 10:7)
(Ammonia) (Nitrogen)

KIL'MAN, Ya.I., kand.tekhn.nauk; KLEVKE, V.A., kand.tekhn.nauk

Ways for lowering product losses during the concentration of
ammonium nitrate solutions by evaporation. Trudy GIAP no.7:
213-218 '57. (MIRA 12:9)
(Ammonium nitrate)

KIL'MAN, Ya.I., kand.tekhn.nauk

Removal of impurities from ammonium nitrate solutions. Part 2.
Trudy GIAP no.7:219-223 '57. (MIRA 12:9)
(Ammonium nitrate)

KIL'MAN, Ya.I. kand. tekhn. nauk; KUZ', N.P.; VETROV, N.Ye.; ALEKSEYEVA, M.N.

Using wash water and main filtrate for the preparation of ammonium
carbonate. Trudy GIAP no.8:164-172 '57. (MIRA 12:9)
(Ammonium carbonate)

Continuous conversion (to NH_4NO_3) of nitrate solutions
with ammonium carbonate. Ya. I. Kil'man. *Trudy*
Gosudarst. Nauch.-Issledovatel. i Proekt. Inst. Azot. Prom.
1957, No. 8, 173-7.—The conditions favorable for carrying
out the continuous process of converting Mg (or Cu) nitrate
to NH_4NO_3 on a lab. scale was investigated. The process
was shown to be possible, but the results must be verified on
a larger scale. v. P. Trimble. *et al.*

KIL'MAN, Ya.I., kandidat tekhnicheskikh nauk.; BELYAYEV, N.I., inzhener.

Utilizing low potential heat from waste steam. Prom. energ. 12
no.4:16-18 Ap '57. (MLRA 10:5)

(Steam) (Nitrogen industries)

AUTHORS: Kil'man, Ya. I., Klevke, V. A.

64-58-3-5/20

TITLE: The Use of Carbonate Waste (Ispol'zovaniye otbrusnogo karbonatnogo shlama)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 3, pp 22-24 (USSR)

ABSTRACT: Nitrogen is bound in carbonate mud in the form of the double salt $\text{MgCO}_3(\text{NH}_4)\text{CO}_3 \cdot 4\text{H}_2\text{O}$. The transport of the mud is facilitated because of its moisture content of 20%, and as the mud is finely dispersed a good distribution in the soil can be expected so that according to the opinion of agricultural experts its use in the Ukraine and Poles'ye regions would be opportune because of its lime-manure properties and its acid-decreasing effect on the soil. The use in the production of granulated superphosphates for the preparation of mineral fertilizers would also be appropriate, as well as for an addition to ammonium nitrate in order to improve the physical properties and to prevent a loss of nitric acid in the production of additives. By experiments with common turnips it was proved that by the use of carbonate mud the crop was 37.5% greater than with natural lime manure. Thus carbonate mud proved an excellent fertilizer especially for soils deficient in magnesium,

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The Use of Carbonate Waste

64-58-3-5/20

whereas parallel experiments in the laboratory of the TsZL of the Dneprodzherzhin ATZ proved that a use in the production of calcium ammonium nitrate leads to good results. Carbonate mud can also be used for the production of the heat insulation material "sovelit" where a drying can be made by centrifuging, and the liquid can be used for the production of solutions of carbonate of ammonia.

1. Fertilizers--Effectiveness
2. Carbonates--Properties
3. Carbonates--Applications

Card 2/2

5(1)

AUTHORS:

Kil'man, Ya. I., Klevke, V. A.

SOV/64-58-8-11/19

TITLE:

The Transportation of High-Concentration Ammonium Nitrate Melts (Transportirovaniye vysokokontsentrirrovannykh plavov ammiachnoy selitry)

PERIODICAL:

Khimicheskaya promyshlennost', 1958, Nr 8, pp 424 - 427 (USSR)

ABSTRACT:

In the production of granulated ammonium nitrate (I) a highly concentrated (98.0 - 98, 5% NH_4NO_3) melt is conducted from high-lying three-stage evaporators into the granulation columns. To make it possible for the melt to flow of itself the system has to be fairly complicated. To simplify design it has been tried several times to use special pumps for pumping the melt. In order to solve the problem, appropriate tests were carried out at the Stalinogorskiy khimicheskiy kombinat (Stalinogorsk Chemical Kombinat) and the Kemerovskiye azotnotukovyy zavod (Kemerovo Nitrogenous Fertilizer Plant), in which pumps of the "Mor" and "KhNZ-6/30" (Figure) were used. The investigations were carried out with melts of relatively

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The Transportation of High-Concentration Ammonium
Nitrate Melts

SOV/64-58-8-11/19

low (93.0 - 95.0%) and higher (97.5 - 98.5%) concentrations. In the Kemerovo Nitrogenous Fertilizer Plant the workers of the TsZL and GIAP conducted extensive and careful investigations. Evaporators of the "AS" system were used in this plant. In the same plant a modification of the chrome steel centrifugal pumps "KhNZ-6/30" designed by the "Sverdlovskiy mashinostroitel'nyy zavod (Sverdlovsk Machinery Works) was tested in 1956. The tests were conducted by N. N. Artem'yeva and N. V. Meshcheryakov, and the pump was changed in the GIAP. The concentration of the melt entering the pumps is 95% NH_4NO_3 . It is circulated until a concentration of 98.5% NH_4NO_3 is reached and is then conducted into the granulation columns. "Mor" type pumps operating with a pressure of 6.2 atmospheres pump melt of a concentration of 98 - 98.5% to the height of 37 m, their capacity being 16.6 cu.m/h. There are 1 figure and 1 table.

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The Transportation of High-Concentration Ammonium
Nitrate Melts

SOV/64-58-8-11/19

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza (State Scientific Research and Planning Institute for the Nitrogen Industry and the Products of Organic Synthesis)

Card 3/3

KIL'MAN, Ya.I.

Preventing the accumulation of impurities in industrial recirculated water. Khim.prom. no.7:601-602 O-N '59. (MIRA 13:5)
(Water supply, Industrial)

5.1300

78203
SOV/80-33-3-4/47

AUTHORS: Kil'man, Ya. I., Klevke, V. A.

TITLE: ~~Concerning the Use of Solutions Contaminated With~~
Concerning the Use of Solutions Contaminated With
Ammonium Nitrate and Ammonia for the Production
of Nitric Acid

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3,
pp 533-535 (USSR)

ABSTRACT: The production of one ton of 55-58% HNO_3 requires
0.4-0.6 ton distilled water. The cost of water could
be saved if the condensed vapor that develops during
the production of ammonium nitrate from nitric acid
and gaseous ammonia were used for this purpose.
The substitution could also use the ammonium nitrate
and ammonia lost in the vapors of nitrate production.
The condensate of these vapors, purified by spraying
over wet filters of air purifiers of ammonium nitrate

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Concerning the Use of Solutions Contaminated
With Ammonium Nitrate and Ammonia for the
Production of Nitric Acid

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SOV/80-33-3-4/47

production, contained 10-12% NH_4NO_3 . The solution was then used for the experimental absorption of $\text{NO} + \text{NO}_2$. It was known that $\text{NO}_2 + \text{NH}_4$ reaction reduces part of the nitrogen to elementary state either directly or because of the decomposition of freshly formed unstable ammonium nitrite. Similarly, the $\text{NO}_2 + \text{NH}_4\text{NO}_3$ reaction reduces nitrogen to elementary state because of the decomposition of both ammonium nitrite and nitrous acid formed as intermediates. Experimenting under various conditions (performed by B. M. Faber), the authors found that the ammonium nitrite resulting from the latter reaction does not decompose at low temperatures, but nitrous acid does. Consequently, twice as much N gets lost as the N content of NH_4NO_3 that reacted with NO_2 . NH_4NO_3 remaining in the produced nitric acid makes concentration of the latter

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Concerning the Use of Solutions Contaminated
With Ammonium Nitrate and Ammonia for the
Production of Nitric Acid

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SOV/80-33-3-4/47

impossible by either direct synthesis or dehydration
with H_2SO_4 . The condensed vapors of ammonium nitrate
production can be purified to a maximum 1% NH_4NO_3
in the condensate by a two-stage treatment: (1) H^+
substitution for the NH_4^+ of both NH_4OH and NH_4NO_3 ,
resulting in NH_4K (K stands for a complex insoluble
cation) and HNO_3 ; (2) Formation of $RaNO_3$ at the
expense of HNO_3 , where Ra is the organic part of anion
exchange resins insoluble in water. The purified
condensate can be used for the production of HNO_3
for limited purposes such as the treatment of
fertilizers, etc. There are 5 Soviet references.

SUBMITTED: May 25, 1959

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27517

S/080/60/033/006/034/041/XX
D232/D302

11.2120

AUTHOR: Kil'man, Ya.I.

TITLE: Determining the boiling points of aqueous solutions
of nitric acid with ammonium nitrate and urea nitrate

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 6, 1960,
1415 - 1418

TEXT: In the single stage production ^{of} ammonium nitrate preheating
of the reagents especially nitric acid, is a very important step,
pre-determining the concentration of ammonium nitrate. Neverthe-
less, initial preheating of nitric acid to temperatures exceeding
85°C creates difficulties, owing to the corrosion of stainless
steel. The corrosion of stainless steel in dilute nitric acid at
relatively high temperatures is quite appreciable especially in
the gaseous phase. One of the indications of the action of ammoni-
um nitrate in reducing corrosion of stainless steel in nitric acid
at elevation temperatures is the electrochemical processes, rela-

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S/080/60/033/006/034/041/XX

Determining the boiling points ...

D232/D302

ted to the rise in the boiling point of the nitric acid containing ammonium nitrate. The effect of urea nitrate, magnesium nitrate and other salts on the boiling point of nitric acid was investigated. The addition of urea nitrate was done following data given by B.Yu. Rozman (Ref. 3: O termicheskoy stoykosti ammiachnoy selitry (Thermal Stability of Ammonium Nitrate) ELIIVT, 106, 1957). Urea nitrate appears as a stabilizer decreasing the thermal composition of ammonium nitrate. The boiling point of the mixture of nitric acid with ammonium nitrate and urea nitrate was determined by the methods of L.M. Kontorovich and V.A. Klevke (Ref. 4: Tr. GIAP, 7, 33, 1957). The data obtained was corrected to standard

pressure using the empirical rule $\frac{P_{\text{mixture}}}{P_{\text{or water}}} = \text{const.}$ From this

data it is clear that with the addition of ammonium nitrate, the boiling temperature of the mixture increases, while in the case of urea nitrate, the reverse happens. This could be explained by the fact that urea nitrate forms an acid compound of the type

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Determining the boiling points ...

S/080/60/033/006/034/041/XX
D232/D302

$\text{NH}_2 - \text{CO} - \text{NH}_2 - \text{HNO}_3$ which is sparingly soluble in water and nitric acid. This property explains the decrease in the boiling temperature of the mixture of nitric acid with urea nitrate since urea nitrate decreases the concentration of nitric acid. There are 2 figures, 3 tables and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J.J. Dorsey, Patents of commercial Solvents Company 2723183, 8.XI.1955.

SUBMITTED: May 25, 1959

Card 3/3

KIL'MAN, Ya.I.

Some results of the activity of the Local Organization of the D.I. Mendeleev All-Union Chemical Society at the State Institute of the Nitrogen Industry and the Products of Organic Synthesis. Zhur.VKHO 6 no.4:461-463 '61. (MIRA 14:7)

1. Predsedatel' Soveta pervichnoy organizatsii Vsesoyuznogo khimicheskogo obshchestva imeni D.I.Mendeleyeva pri Gosudarstvennom institute azotnoy promyshlennosti i produktov organicheskogo sinteza. (Chemical societies)

33443

S/064/62/000/001/006/008
B110/B138

11.2120

AUTHOR: Kil'man, Ya. I., Candidate of Technical Sciences

TITLE: Stabilization of the thermal decomposition of highly concentrated fusions of ammonium nitrate

PERIODICAL: Khimicheskaya promyshlennost', no. 1, 1962, 66 - 69

TEXT: For the production of highly concentrated NH_4NO_3 fusions (99.5 - 99.8% NH_4NO_3), evaporation has to be carried out at $\sim 200^\circ\text{C}$, and this may mean considerable N_2 losses due to thermal decomposition. In experiments at 165 - 240°C and 500 mm Hg, the inhibiting effect of different urea additions (0.1 - 1.0% by weight of NH_4NO_3) was studied and some of the physical and chemical properties of the solid substance. One cause of decomposition being increase of free acid due to NH_4NO_3 hydrolysis, variations in acid content of the fusion and pH no. of the medium were studied in dependence on evaporating temperature and time. 300 ml of neutral NH_4NO_3 solution of given concentration was heated to a given

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S/064/62/000/001/006/008
B110/B138

Stabilization of the thermal...

temperature for 2 - 30 min at 500 mm Hg. Then the condensate was re-conducted into the reaction vessel to keep the concentration constant. Fusion and condensate were analyzed for NH_4NO_3 , HNO_3 , NH_3 , H_2O , urea (urease method), and nitrite (by KMnO_4 in the condensate) content. The concentration of the fusion was determined by the formalin method and from moisture content, and pH was determined in a 10% aqueous solution. With 2 min at 165 - 210°C losses related to N_2 are 0.11 - 0.19%. They increase with evaporation time and temperature, reaching a maximum of 1.4% at 240°C . With 5 min of evaporation, acidity increases slightly before (200°C - 0.035%) and rapidly after 200°C . At 240°C , the nature of decomposition changes and nitrous oxide forms. Acid content is reduced to about 1/4 by a urea addition of 0.2% with 20 min at 220°C . With an addition of 0.1 - 0.2% at 180 - 200°C , a neutral fusion can be obtained even with 30 min evaporation time. Additions of 0.3 - 0.5% are sufficient to stabilize thermal decomposition at 210 - 220°C . The pH no. increases with urea additions. Additions of 0.1 - 0.3% are recommended to eliminate neutralization by gaseous NH_3 , to obtain a neutral final product, and

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Stabilization of the thermal...

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S/064/62/000/001/006/008
B110/B138

improve working conditions. Agglutination was 6.5% with a urea addition of 0.5% and non-existent with samples obtained at $> 200^{\circ}\text{C}$. The hygroscopic point was determined with an automatic electromagnetic balance with particles $< 2 \text{ mm}$ and $> 1 \text{ mm}$. The humidity of the samples was determined by the iodopyridine method. The hygroscopic points measured on particles $< 2 - > 1 \text{ mm}$, remained constant and agreed with published data. There are 4 figures, 3 tables, and 20 references: 11 Soviet and 9 non-Soviet. The four most recent references to English-language publications read as follows: Chem. Eng. News, 36, no. 34, 50 (1958); Chem. Trade J., 143, no. 3721, 724 (1958); G. Feik, R. Hainer, J. Am. Chem. Soc., 76, 5860 (1954); C. Borland, E. Schali, J. Ass. Offic. Agric. Chem., 42, no. 3, 579 (1959). ✓

ASSOCIATION: GIAP

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34720

S/137/62/000/002/104/14
A030/A101

12.2300

11.1160

AUTHOR:

Kil'man, Ya. I., Zil'berman, D. E.

TITLE:

Corrosion of 1X18H9T (1Kh18N9T) steel in a mixture of nitric acid and ammonium nitrate at high temperatures

PERIODICAL:

Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 82, abstract 21560
(Vestn. tekhn. i ekon. inform. N.-i. in-t tekhn.-ekon. issled.
Dokl. kom-ia Sov. Min. SSSR i Khimii", 1961, no. 2, 66 - 68)

NOTE:

The investigations were carried out upon protected polished specimens of 1Kh18N9T steel. The tests were carried out simultaneously in pure HNO_3 and HNO_3 with an admixture of 5, 10, and 20% NH_4NO_3 for a period of 100 hours. The first series of tests were carried out in 57% HNO_3 at boiling temperature. For the first 100 hours the admixture of NH_4NO_3 reduced the corrosion slightly, but later on the corrosion of the specimens in the HNO_3 containing 20% NH_4NO_3 was increased. The corrosion of 1Kh18N9T steel in boiling HNO_3 is very great and partakes of a pitting nature. In the second series of tests the acid was not permitted to boil. The result of that test shows that 1Kh18N9T steel may be

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Corrosion of...

S/137/52/000/002/104/144
A060/A101

Utilized in apparatus operating with HNO_3 of the indicated concentration at temperatures up to 100°C .

N. Yudin

[Abstracter's note: Complete translation]

X

Card 2/2

KIL'MAN, Ya.I.

Nomogram for determining the thermal effect of neutralization
reaction during the production of ammonium nitrate. Khim.prom.
no.2:146 F '62.

(MIRA 15:2)

(Ammonium nitrate)

(Heat of reaction)

KIL'MAN, Ya.I.

Role of the local organization of the D.I. Mendeleev
All-Union Chemical Society in carrying out the decisions
of the March (1962) Plenum of the Central Committee of the
CPSU. Zhur. VKHO 7 no.6:689 '62. (MIRA 15:12)
(Chemical industries)

KIL'MAN, Ya.I., kand. tekhn. nauk

More effective utilization of the heat of industrial chemical
reactions. Prom. energ. 19 no.13:42 Ja '64. (MIRA 17:2)

KIL'MAN, Ya.

Develop voluntary principles. NTO 5 no.8:53-54 Ag '63.
(MIRA 16:10)

1. Predsedatel' soveta Vsesoyuznogo khimicheskogo obshchestva imeni D.I. Mendeleeva pri Gosudarstvennom nauchno-issledovatel'skom i proyektnom institute azotnoy promyshlennosti i produktov organicheskogo sinteza.

KIL'MAN, Ya.I.; ROZLOVSKIY, A.I.

For more rapid introduction of the achievements of science
and technology into the national economy. Zhur. VkhO 8 no.3:
349-351 '63. (MIRA 16:8)

KIL'MAN, Ya.I.

Activity of the board of the local organization of the
D.I. Mendeleev All-Union Chemical Society at the State Insti-
tute of the Nitrogen Industry. Zhur. VKHO 8 no.5:574 '63.
(MIRA 17:1)

KIL'MAN, Ya.I.; KLEVKE, V.A.

Production of ammonium nitrate by the one-step method. *Biul.tekh.-
ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform.* 16 no.8:
14-18 '63. (MIRA 16:10)

KIL'MAN, Ya.I., inzh.

Inhibition of the thermal decomposition of ammonium nitrate
during its production. Bezop. truda v prom. 8 no.11:41-42
N '64. (MIRA 18:2)

L 2307-65 PA/BWP(6)-2/BWP(6)/BWP(6)/BWP(6)/BWP(6) PAA-4/PA-4/PA-4/PA-10
ACCESSION NR. AP4017791 132(6) ID/M/JWB/0063/64/009/006/0591/0592

AUTHOR: Kil'man, Ye. I.

TITLE: Safe operating conditions in the one-stage (steamless) method of manufacturing ammonium nitrate

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal. v. 9, no. 5, 1984, 691-692

TOPIC TAGS: ammonium nitrate, manufacture, safety, precautions, operating condition

ABSTRACT: Literature and original data was used to determine the kinetics of the thermal decomposition of ammonium nitrate at 165-240C and final pressure of 0.276 atm. Nitrogen loss and acidity of the melt increased with temperature and evaporation time. Safety in the steamless method is assured by the short residence time of about 0.4 sec. of the reaction products in the reactor-neutralizer, and by the presence of free ammonia and water vapor in the gas phase. With the addition of 0.2-0.3% of urea, almost neutral products were obtained up to 220C; nitrogen losses were reduced. According to

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U-23017-65

ACCESSION NR: AP4047781

Ya. I. Kil'man and V. A. Kleyke (Byull' ekonom. informatsii GOSNITI, No. 8, 14, (1963)) the melt temperature could be reduced from 220 to 170C with a simultaneous increase in the final concentration. Investigations in a large tests reactor at 211-220C showed that the process proceeded normally even if the HNO_3 concentration was over 60%. If the reaction zone temperature increased it could be reduced by lowering the pressure in the system. Orig. art. has: 4 figures.

ASSOCIATION: Gosudarstvennyy Institut azotnoy promyshlennosti i produktov organicheskogo sinteza (State Institute of the Nitrogen Industry and Products of Organic Synthesis)

SUBMITTED: 20Feb64

ENCL: 00

SUB CODE: IO, CC

NO REF SOV: 007

OTHER: 000

Card 2/2

KIL'AN, Ya.I.

Production of nitric fertilizers. Biol. tekhn.-ekon. inform. 1961.
nauch.-issl. Inst. nauch. i tekhn. inform. 17 no.8: 3-24 no. 10.
(MIA 17:1)

KIL'MAN, Ya.I.

Present state and prospects for the development of nitrogen
fertilizer production. Zhur. prikl. khim. 37 no.12:2569-
2575 D '64. (MIRA 18:3)

1. 230/2-55 EPA(a)-2/ET(a)/ET(c)/ET(d)-2/EA(a)/ET/T/ET(t)/EPA(bb)-2/ET(b)
 P-2/P-10/P-10/P-10/P-10 LJP(a)/REL LJV/JD/W/JV/JD/VN/JVO
 8/0080/84/037/012/2631/2636
 ACCESSION NR: AP3002190

AUTHOR: Kil'man, Ya. I., Zil'berman, D. E.

TITLE: Corrosion under conditions for preparing ammonium nitrate by the one-stage (steamless) method

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 12, 1984, 2631-2636

TOPIC TAGS: ammonium nitrate production, corrosion, corrosion resistance, construction material, niobium, quartz, Teflon lining

ABSTRACT: The corrosion resistance of various materials was investigated to find the ones suitable for various parts of the equipment for ammonium nitrate production by the steamless method. Niobium was recommended for the heat exchanger; 1Kh18N9T steel was resistant to 56% HNO₃ + 15% NH₄NO₃ at 200C for 100 hours, but substantial corrosion set in in 200 hours. Niobium was also recommended for the reactor-neutralizer; stainless steel and ferrosilicide corroded, especially in the upper zone of the reactor. Quartz was suitable for

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ACCESSION NR: AP5002190

attachments: porcelain Reaching rings corroded. The possibility of using Teflon
linings was discussed; the technique of applying them to stainless steel must
be improved. Orig. art. has 4 tables 18

ASSOCIATION: None

SUBMITTED: 12Jun68

ENCL: 00

SUB CODE: GC

NR REF SOV: 007

OTHER: 002

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KIL'MAN, Ya.1.

Boiling points of nitric acid and ammonium nitrate solutions at
various pressures. Khim. prom. 40 no.11:844-845 N '64
(MIRA 18:2)

1015-01 1015-01/1015-01/1015-01/1015-01

1015-01/1015-01/1015-01/1015-01

1015-01/1015-01/1015-01/1015-01

1015-01/1015-01/1015-01/1015-01

1015-01/1015-01/1015-01/1015-01

1015-01/1015-01/1015-01/1015-01

1015-01/1015-01/1015-01/1015-01

ABSTRACT: An attempt was made to synthesize ammonium nitrate using an increased concentration (62-63%) of nitric acid. Tests were conducted using an enlarged unit as shown in fig. 1 of the Enclosure. Nitric acid of a concentration less than 60% was heated; this was not done when the concentration was greater than 60% (although the ammonia was heated to 160°C). The nitric acid was fed into pressure tank 3. Gaseous acid from the pressure tank was returned by an overflow line to acid supply tank 1. The nitric acid entered the horizontal heater 1 where it was heated to a predetermined temperature. Gaseous ammonia entered the intermediate space of the vertical heater 5 for additional heating. When the reagents were heated to the desired temperature, they were fed to reactor-neutralizer 6 where the ammonia and

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11-0-05

ACCESSION NR: AP0012342

nitric acid were interacted to form ammonium nitrate. There were nearly no losses of bound nitrogen in the gaseous phase due to thermal decomposition of the ammonium nitrate or the initial reagents. The effective use of the nitrogen contained in the initial components (ammonia and nitric acid) when the process was conducted under basic conditions averaged 98.8%. It was found that nitric acid can be used in concentrations greater than 60% to produce ammonium nitrate when the reacting mass is held in the high intensity reactor for short periods. Orig. art. has 1 figure, 3 tables.

ASSOCIATION: Gosudarstvennyy nauchnoy khimicheskiy promyshlennosti pri Gosplane SSSR (State Committee for the Chemical Industry of Gosplan SSSR)

SUBMITTED: 1706164

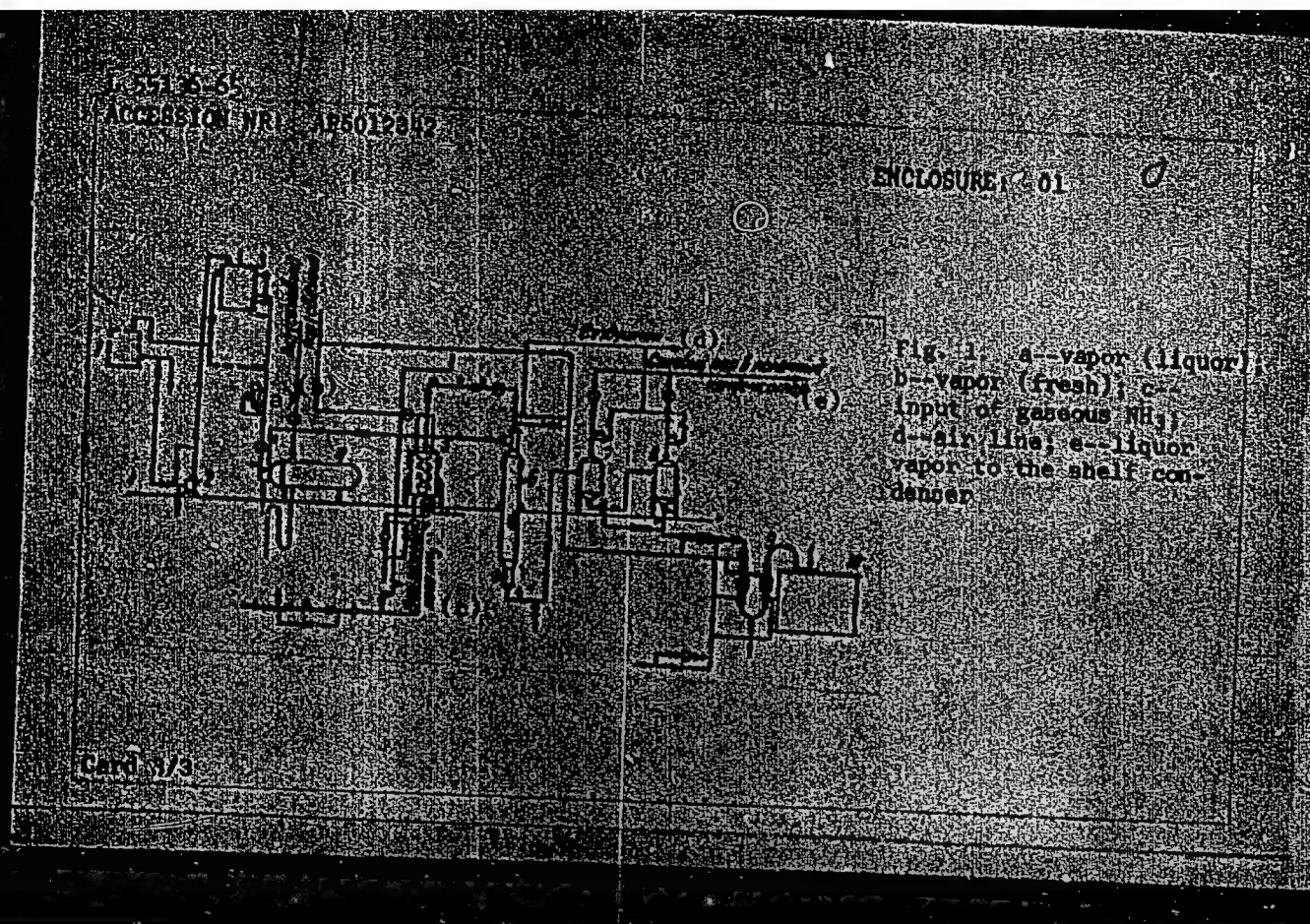
ENCL: 01

SUB CODE: GC, IC

NO REF SOV: 001

OTHER: 000

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KIL'MAN, Ya.I.

Theoretical principles of the neutralization of ammonium nitrate
production. Uzb.khim.zhur. 9 no.1:23-30 '65.

(MIRA 18:6)

1. Gosudarstvenniy nauchno-issledovatel'skiy i proyektnyy institut
azotnoy promyshlennosti i produktov organicheskogo sinteza.

KIL'MATOV, R.

Saving time at every working cycle. Avt. dor. 28 no.1:11
Ja '65. (MIRA 18:3)

KIL'MATOV, R.F.

LEVITAN, I.I.; KIL'MATOV, R.F.

Organizing high production work in asphalt concrete plants. Avt.dor.
18 no.4:4-6 J1-Ag'55. (MLRA 8:11)
(Asphalt concrete)

KIL'MATOV, Rustan Fayzulgazanovich; SILAKOV, D.R., redaktor; KOGAN, F.L.,
tekhnicheskii redaktor.

[Highly productive work in asphalt concrete plants] Vysokoproizvo-
ditel'naya rabota asfal'tobetonnoy zavoda. Moskva, Nauchno-tekhn.
izd-vo avtotransp.lit-ry, 1957. 60 p. (MIRA 10:11)
(Concrete plants)

KIL'MATOV, R.F., inzh.

Promoting use of gas in asphalt-concrete plants. Avt.dor. 22
no.1:9-10 Ja '59. (MIRA 12:2)
(Gas industry) (Asphalt concrete)

XIL'MATOV, Rustem Fayzulgayanovich; YAKOVLEVA, A.I., red.; NIKOLAYEVA,
L.N., tekhn.red.; GALAKTIONOVA, Ye.N., tekhn.red.

[Using gas at asphalt-concrete plants] Gazifikatsiia asfal'to-
betonnykh zavodov. Moskva, Nauchno-tekhn.izd-vo M-va avtomo-
bil'nogo transporta i shosseinykh dorog RSFSR, 1960. 62 p.
(MIRA 13:7)

(Gas as fuel) (Asphalt concrete)

KIL'MATOV, R.F., inzh.

Using small doses of cement. Avt. dor. 23 no.4:9-10 Ap '60.
(Tatar A.S.S.R.--Roads, Gravel) (MIRA 13:6)

KIL'MATOV, R., inzh.

Striving for a high productivity. Avt. dor. 26 no.6:3-4 Je '63.
(MIRA 16:8)

(Kazakhstan--Road construction) :

KIL'MATOV, Rustem Fayzulgayanovich; IL'INA, L.N., red.

[Foundation beds of materials compacted by cement] Osnovaniia iz ukreplennykh tsementom materialov. Moskva, Transport, 1965. 60 p. (MIRA 18:3)

KIL'MATOV, R.F., inzh.

Improve the planning of road construction work. Avt.dor.
28 no.8:25-26 Ag '65. (MIRA 18:11)

KIL'MAYEV, B. (Novocherkassk)

Industrial aesthetics in the desing of electric locomotives.
Tekh. est. no.4:32 Ap '65. (MIRA 18:6)

KILBOM, J.; NAVRATIL, V.

End toxicity of waste waters. p. 182. VODA. (Ústřední správa
vodního hospodářství) Praha. Vol. 35, no. 6, June 1956.

DO RCB: East European Accessions List, Vol. 5, no. 9, September 1956

KILMENKO, V.G.; STASEVA, L.P.

Protein and nonprotein nitrogen of the green bulk of lentils and vetch
at various phases of their development. Trudy po khim. prirod. soed.
no.3:65-74 '69. (MIRA 16:2)

1. Kishinevskiy gosudarstvennyy universitet. Laboratoriya khimii
balka.
(Legumes) (Plants---Chemical analysis) (Nitrogen)

KIL'METOV, K., prepodavatel'

Save machinery. Prof.-tekh. obr. 18 no.9:23 S '61. (MIRA 14:11)

1. Shchuchinskoye uchilishche mekhanizatsii sel'skogo khozyaystva
No.40, Kokchetavskaya oblast'.
(Kokchetav Province--Farm mechanization--Study and teaching)

ACC NR: AP6027235

SOURCE CODE: UR/0109/66/011/008/1436/1440

AUTHOR: Kolesov, L. N.; Mekhantsev, Ye. B.; Kil'metov, R. S.;
Shapovalov, V. I.; Zhuravskiy, V. L.

ORG: none

TITLE: Calculation of characteristics of distributed R-C-NR-structures having
p-n-junction-type nonuniform capacitance

SOURCE: Radiotekhnika i elektronika, v. 11, no. 8, 1966, 1436-1440

TOPIC TAGS: pn junction, circuit microminiaturization

ABSTRACT: A complete approximate matrix is set up of admittances of a non-uniform structure (see figure) consisting of two resistances separated by a reverse-biased p-n junction. In practice, such a structure has been used in component microminiaturization, and one of the resistances has been represented

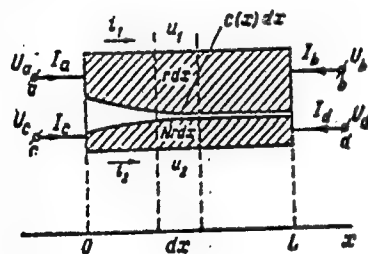
Card 1/2

UDC: 539.293.011.41

APPROVED FOR RELEASE: 06/13/2000

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ACC NR: AP6027235



by a semiconductor supporting base. Although several nonuniform structures have been analyzed by other researchers (e.g., P. S. Castro, Proc. Nat. El. Conf., v. 19, 1963), they cannot represent the p-n junction. The transient response of such a p-n-junction-containing structure is investigated using differential and integral circuits as examples. The transient-response theoretical curves are corroborated by experimental curves obtained from a p-Ge

specimen acted upon by 30-nsec pulses. Orig. art. has: 4 figures and 17 formulas.

SUB CODE: 09 / SUBM DATE: 30Mar65 / ORIG REF: 000 / OTH REF: 003

Card 2/2

KIL'METOV, R.S., starshiy inzh.; KOVALEV, A.V., starshiy inzh.;
MEKHANTSEV, Ye.B., aspirant

The First Interuniversity Conference on Subminiaturization of
Electronic Equipment. Izv. vys. ucheb. zav.; radiotekh. 5
no.4:538-539 J1-Ag '62. (MIRA 16:6)

(Miniature electronic equipment—Congresses)

KIL'METOV, R.T., inzh.

Our practices. Stroil. pred. neft. prom. 3 no. 4:28-29 Ap '58.
(Oil fields--Equipment and supplies) (MIRA 11:5)

KILMON, YE. D.

PA 32/49T28

USSR/Engineering
Boilers
Fuel - Conservation

Jun 48

"Letter to Editor on Professor S. V. Tatishchev's
'Efficient Methods of Burning Peat in Boiler
Installations,'" Ye. D. Kilmon, Engr, Head, Boiler-
works, Klintsovskiy Plant, Former Worker in Bryansk
GRES, $\frac{1}{2}$ p

"Elek Stants" Vol XIX, No 6

Criticizes various erroneous statements in
Tatishchev's book.

32/49T28

KILMOV, Ye.N., inzh.

Using self-regulation in the cooling systems of internal combustion
marine engines. Sudostroenie 28 no.11:36-37 N '62. (MIRA 15:12)
(Marine diesel engines—Cooling)

KILMOVA, Ye.A., inzh.

A universal MDU-3 thrasher-crusher. Trakt. i sel'khoz mash. 31 [i.e. 32]
no.11:34-35 N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo
mashinostroyeniya. (Corn (Maize)—Harvesting) (Harvesting machinery)

YEGOROV, K., sud'ya vsesoyuznoy kategorii; GONCHARENKO, V., absolyutnyy
champion Ukrainy po planernomu sportu; KILNA, A.; EPERMANIS, Z.

In soaring flight. Kryl. rod. 16 no.9:7 S '65. (MIRA 18:12)

1. Nachal'nik Lipyayskogo obshchestvennogo kluba (for
Epermanis).

ACC NR: AP7003597

SOURCE CODE: UR/0236/66/000/003/0191/0200

AUTHOR: Kilna, A. A.

ORG: Institute of Physics and Mathematics of the Academy of Sciences of Lithuanian SSR (Institut fiziki i matematiki, Akademi nauk Litovskoy SSR)

TITLE: Reliability of magnetic tape memories

SOURCE: AN LitSSR. Trudy. Seriya B. Fiziko-matematicheskoye, khimicheskoye, geologicheskoye i tekhnicheskoye nauki, no. 3, 1966, 191-200

TOPIC TAGS: magnetic tape, reliability engineering, *computer circuit*

ABSTRACT: By lumping together noise associated with magnetic tape quality, inherent noise of signal processing circuits, and noise caused by mechanical sources such as flutter and tape-head channel crosstalk, the author expresses the reliability of digital tape readers as a function of probabilities of misreading 0 and 1. Assuming that noise follows a normal distribution pattern, the author shows that the probability of tape reader failure is a function of discriminator-threshold-level discerning between 0 and 1, and that this probability has a minimum and maximum value. A probability of failure for reading a random code is derived. These results are used to evaluate the reliability of the BESM-2M computer tape memory system. A method for finding the actual distribution of signal and noise amplitudes in this system is presented. For the former, a known random code was read by a discriminator whose threshold was lowered from the nominal working level. The information

Card 1/2

UDC: none

ACC NR: AP7003597

obtained was processed on a computer which determined the failure frequencies. The distribution of noise amplitudes was obtained analogously by raising the discriminator threshold. The reliability of the BESM-2M tape reader is found for both working and optimum threshold levels, indicating that they were not the same. Orig. art. has: 39 formulas, 2 figures, and 1 table. [BD]

SUB CODE: 09/4/ SUBM DATE: 19Apr66/ ORIG REF: 004/ OTH REF: 003/

Card 2/2

KILOSOVA, A. A. and MEYEROVICH, L. A.

Teoriya Tzepei i Proektirovanie Usilitelei s Obratnoi Svyazyu (Network Analysis
and Feedback Amplifier Design), Edition of Foreign Lit., MOSCOW 1948.

VOL'FKOVICH, S.I.; GILLER, M.Ye.; GOL'DERBITER, M.S.; IONASS, A.A.;
KILCHITSKIY, I.M.; REMEN, R.Ye.

Production of fodder and defluorinated fertilizer phosphate.
Khim. prom. 41 no.1:18-22 Ja '65.

(MIRA 18:3)

KHISHCHUK, A.A.; BUCHINSKIY, Yu.L.; ROGACHEV, Ye.N.; VORONIN, V.A.;
KILOCHITSKIY, N.G.; LISKONOG, N.G.; CHEVKOV, L.V., red.
izd-va; OVSEYENKO, V.G., tekhn. red.

[Practice of constructing headframes] Opyt stroitel'stva
bashennykh koprov. Moskva, Gosgortekhnizdat, 1963. 82 p.
(MIRA 16:4)

(Mine buildings)

KILOSANIDZE, N.M.

Bacteriology in endocarditis. Trudy Tbil.GIDUV 6:363-368 '62.
(MIRA 16:2)
(ENDOCARDITIS) (BACTERIOLOGY, MEDICAL)

25

B KILOTYRKIN, YA. PROCESSES AND PROPERTIES INDEX

The Hydrogen Overvoltages on the Lead Electrode and the Stationary Solution Potential of Lead in Sulfuric Acid. (In Russian.) In: Kilotyarkin, and N. Bune. *Journal of Physical Chemistry (U.S.S.R.)*, v. 21, no. 5, 1947, p. 531-587.

11 references.

L 38863-66 EWP(j)/EWP(k)/EWP(m)/T/EWP(v) IJP(c) RM/RH/WW
 SOURCE CODE: UR/0081/65/000/022/S065/S065

ACC NR: AR6015914

AUTHOR: Kil'p, Yu. L.; Glizburg, I. L.; Batova, N. I.; Andreyev, Yu. Ye.

45
B

TITLE: Ultrasonic welding of products made of thermoplastics

SOURCE: Ref. zh. Khimiya, Abs. 223390

REF SOURCE: Tr. N.-i. tekhnol. in-t, vyp. 8, 1964, 98-102

TOPIC TAGS: thermoplastic material, ultrasonic welding, POLYAMIDE, RESIN,
CAPRON, STYRENE, COPOLYMER, POLYSTYRENE

ABSTRACT: Ultrasonic welding of the following thermoplastics was studied: polyamide resin 68, cast capron of brand V, styrene copolymer (SNP-2), polystyrene, high-strength polystyrene. The study established the feasibility of welding thermoplastics with ultrasound; the unit UZAP-2 was built for this purpose, and its technical data are cited. The unit has an acoustic feedback for the automatic fine tuning of the generator frequency to the natural frequency of the transducer and for stabilizing the amplitude of oscillations of the instrument. The welding was carried out at amplitudes of ultrasonic vibrations of 15-25 μ m, forces pressing the instrument to the part of 20-150 kg, and a time of 1.5-6.25 sec. The strength of joints made of high-strength polystyrene was 4 times greater than that of the base material (60 instead of 15 kg/cm²). A series of data are cited on the strength of weld joints, details of the process, and design of the instruments. The main advantage of the ultrasonic welding of plastics is the liberation of the maximum amount of heat in the welding

Card 1/2 -

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ACC NR: AR6015914

zone without overheating of the remaining mass of the part. A. M. [Translation of abstract].

SUB CODE: 11,13

ns
Card 2/2

Kil'pa G.V.

USSR/General Problems of Pathology - Inflammation.

T-1

Abs Jour : Ref Zhur - Biol., No 4, 1958, 17154

Author : Kil'pa, G.V., Ledovskikh, A.V.

Inst : -

Title : The Reaction of Chickens to Subcutaneous or Intramuscular Injections of Turpentine.

Orig Pub : Sb. nauchno - issled. robot. stud. Stavropol'sk. s. -kh. in-t, 1956, vyp. 4, 103-110.

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000722520018-4"

ATKINS, G.B.; KIL'PINEN, Urho; PERGYUSON, D.B.; MAKVEYG, Amos; TAMMINEN, Mauro; ISKARO, Rubens; MILLER, Armando

Significance of the Fifth World Trade-Union Congress to the workers. Vsem. prof. dvizh. no.8:7-14 Ag '61. (MIRA 14:8)

1. Chlen Ispolnitel'nogo komiteta mestnoy sekti v Niigata, Yaponiya (for Mitsuo Nakamura).
2. Chlen TSentral'nogo ispolnitel'nogo komiteta profsoyuza trudyashchikhsya gosudarstvennykh zheleznykh dorog, Yaponiya (for Soichi Khosoi).
3. General'nyy sekretar' Federatsii kotel'shchikov Avstralii (for Bakli).
4. Predsedatel' Avstraliyskoy federatsii gornyakov i trudyashchikhsya shifernykh predpriyatiy (for Parkinson).
5. Federal'nyy sekretar' Assotsiatsii kuznetsov Avstralii (for Atkins).
6. Sekretar'kaznachey Avstraliyskoy assotsiatsii parovoznykh mekhanikov i mashinistov (Novyy Yuzhnyy Uel'sa) (for Pergyuson).
7. Sekretar' Avstraliyskoy federatsii rabotnikov promyshlennosti po proizvodstvu alkogol'nykh napitkov i rodstvennykh predpriyatiy (sektiya Novogo Yuzhnogo Uel'sa) (for Makveyg).
8. Sekretar' profsoyuza kamenshchikov Finlyandii (for Kil'pinen).
9. Sekretar' profsoyuza vodolazov Finlyandii (for Tamminen).
10. Chlen Ispolnitel'nogo komiteta Vsemirnoy federatsii profsoyuzov (for Iskaro).
11. Vitse-predsedatel' Natsional'noy konfederatsii bankovskikh sluzhashchikh Brazili, predsedatel' Federatsii bankovskikh sluzhashchikh shtata Minas Zherias (for Ziller). (World Federation of Trade Unions--Congresses)

KIL'FIO N .N .

26011

N.N. utryennyaya gimnastika v starshyey gruppe, doshkol. Vospitaniye,
1949, No. 8, c. 6-11

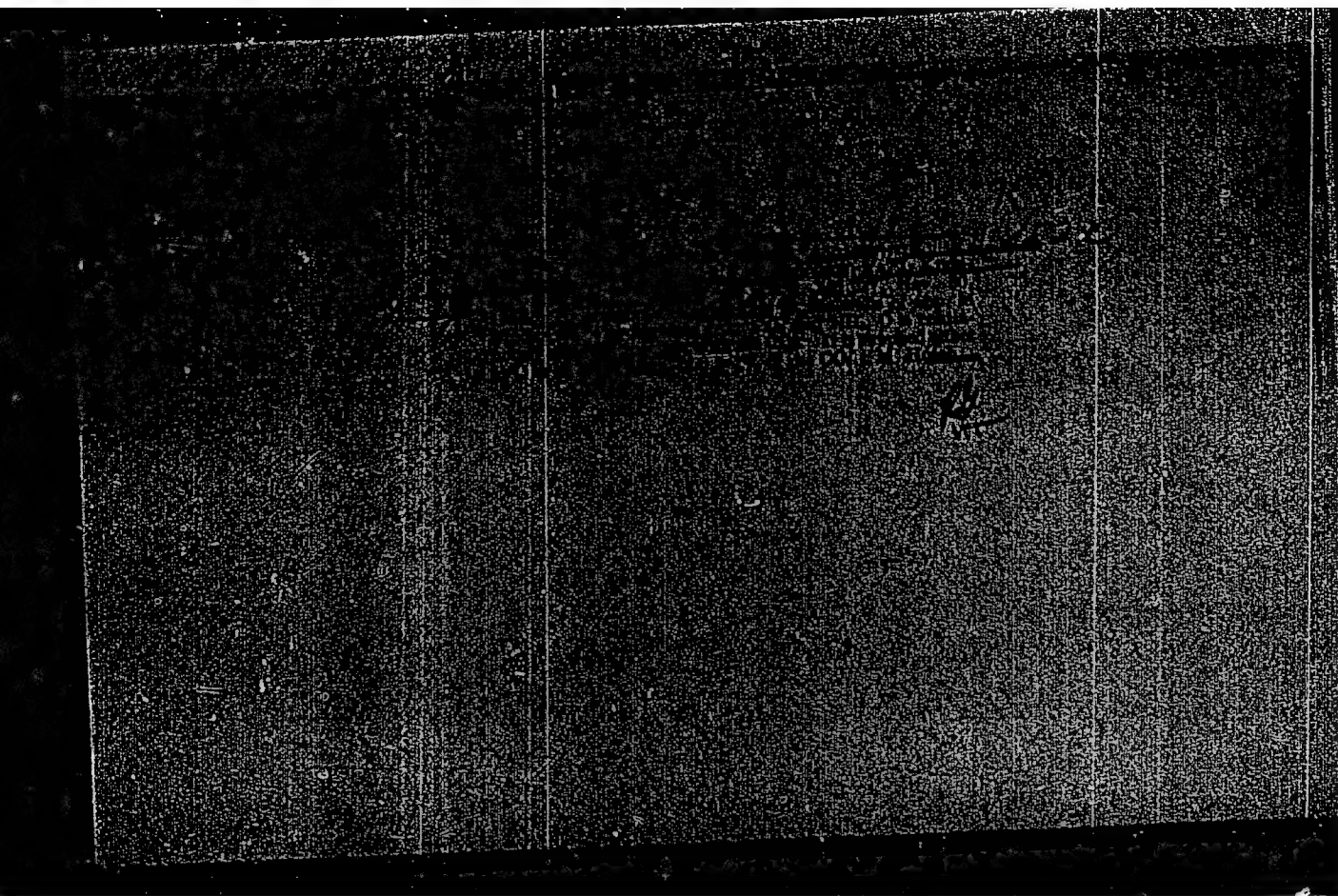
So: Letopis' No. 34

KIL'PIO, N.N.

[Gymnastics and active games in the kindergarten] Zaniatia gimnastiki i podvizhnymi igrami v detskom sadu; iz opyta raboty. Moskva, [Uchpedgiz] 1954. 87 p. (MIRA 8:3)
(Physical education for children)

"APPROVED FOR RELEASE: 06/13/2000

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APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000722520018-4"

MUKHLENOV, I.P.; TOMARYINA, Ye.S.; KIL'SHTEDT, K.K.; KHALIPA, V.M.;
NIKITINA, L.F.

Removing the sulfuric acid fog. Trudy LTI no.54:103-116 '59.
(Sulfuric acid) (Gases—Purification) (MIRA 13:8)

KILSURSKI, D.; PASHEV, N.

"Electron microscopic observation on genesis of cobalt-aluminum oxide catalyst. I. Effects of thermal treatment." In English. p. 25

DOKLADY. Sofia, Bulgaria, Vol. 12, No. 1, January/February, 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 9, No. 2, February, 1960. Uncl.

KILITER, A. YA. 1

Ca

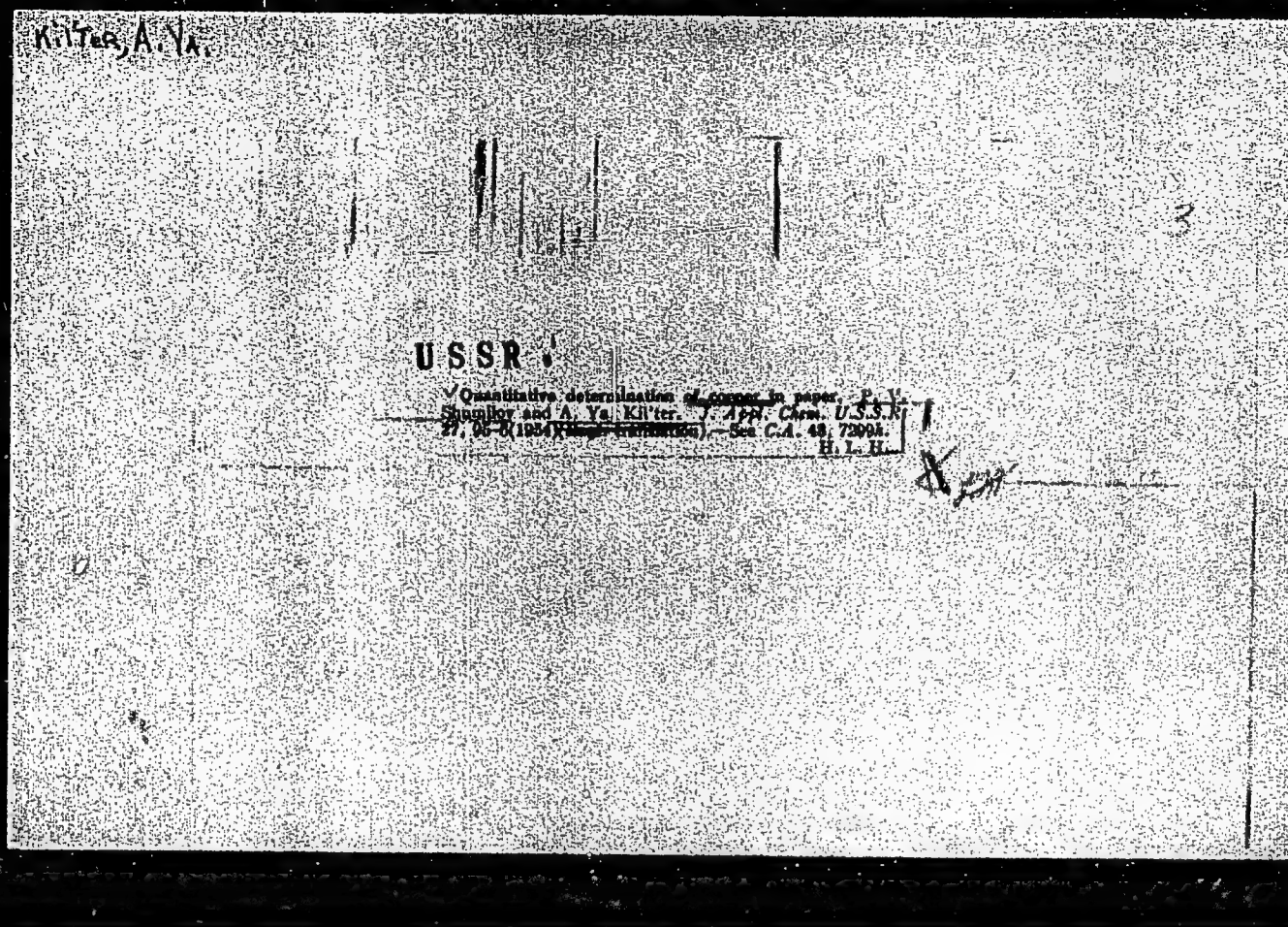
Influence of electrolytes upon the polarographic waves of cadmium and lead. S. P. Shalkind and A. Ya. Kiliter. *J. Applied Chem. (U. S. S. R.)* 13, 455-62 (in German, 462) (1940). -- A rectilinear relation between the height of a wave of Cd and its concn. was observed in solns. of KCl, Na₂SO₄, ZnCl₂ and ZnSO₄, while the concn. of Cd varied within 2.5×10^{-5} - 12.5×10^{-5} g./cc. The same relation was observed for Pb (at concn. 2.0×10^{-5} - 30.0×10^{-5} g./cc.) in KCl and ZnCl₂. A change in concn. of KCl from 2.0 to 0.1 mol./l. did not affect the height of a wave of Cd or Pb, but decrease in concn. of ZnCl₂ or ZnSO₄ increased the waves of Cd or Pb. The dimension of a wave of Cd in equimolar solns. of KCl, ZnCl₂ and ZnSO₄ decreased in the order named. The Pb wave in 0.45 M (and less) ZnCl₂ soln. was less than in a soln. of KCl of the same molarity. For detg. Cd and Pb in Zn compds. of the standard solns. should be prepd. in solns. of Zn of the same molarity as those of the unknown. A. A. P.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

KIL'ITER H. / A
 CA

DETERMINATION OF zinc sulfide and oxide in lithopone by the polarographic method. R. P. Shushkind, A. Ya. Kil'ier and I. I. Rber. *Zhurnal Khim. 10, 405-6 (1941)* — *Detn. of ZnO*. Add 20 ml. of 10% HCl to 1 g. of lithopone, boil for 20-25 min., cool, neutralize with concd. NH_3 , add 40 ml. of a mixt. contg. 2.5% NH_3 and 10% NH_4Cl and dil. with water to 100 ml. Boil, allow to settle, and withdraw 10 ml. To this add Na_2S , 5 drops of 5% glue soln. and take the polarogram. Then add 1-2 ml. of standard Zn soln. and take the polarogram again. Calc. the ZnO from % ZnO = $m \cdot h_1 \cdot 10.100 \text{ZnO} / (h_2/v_1 - h_1/v_2 \cdot \text{Zn})$ where m is g. of Zn in standard, h_1 is height of wave of test soln., h_2 height of wave of soln. with the standard, v_1 is vol. of test soln., v_2 is vol. of test soln. + standard, and g is g. of lithopone sample. *Detn. of ZnS*. Add 20 ml. HCl (1.12) to 0.5 g. lithopone, boil to expel H_2S and toward the last add a few drops of concd. HNO_3 or a crystal of KClO_3 . Dil. with a small amt. of water, filter, wash the ppt. by decantation, then wash it on the filter with water contg. H_2SO_4 , and finally with distd. water. Dil. with water to 250 ml. Use part of this soln. for the colorimetric detn. of Fe and another part for the polarographic detn. of Zn. The ppt. is used for detg. BaSO_4 . To det. total amt. of Zn neutralize 50 ml. of the soln. with concd. NH_3 to methyl orange, add 35-40 ml. of a mixt. of 2.5% NH_3 and 10% NH_4Cl and dil. with water to 100 ml. Stir and withdraw 10 ml. To this add Na_2SO_4 , glue and then take the polarograms without the standard and with the standard. B. Z. Kamich

350-354 METALLURGICAL LITERATURE
 100000 74



KIL' TER, A. Ya.

Quantitative determination of copper in paper. 1. V. Shunilov and A. Ya. Kil' ter. *Zhur. Priklad. Khim.* 27, 109-111 (1954). Fe in paper interferes with the detn. of Cu. The addn. of NH_4F results in the formation of a stable, colorless complex $(\text{FeFe})^{2+}$ which does not react with iodine. The Cu in the ash, having been converted to the nitrate, is treated with a buffer soln. (1 part N NaOH and 9 parts N AcOH) and 8-10 drops of satd. NH_4P . While stirring 0.2 g. of KI is added and the iodine titrated with $\text{Na}_2\text{S}_2\text{O}_3$.
I. Bencowitz

mf 10-12-54

SHUMILOV, P.V., kand.tekhn.nauk; KIL'TER, A.Ya., inzh.

Method for quantitative determination of manganese content in
viscose cellulose. Trudy LTITSBP no.8:120-122 '61. (MIRA 16:9)
(Woodpulp--Analysis) (Manganese--Analysis)

KILVENYI, F.; SZABO, J. VINKLER, E.

Establishing the structure of aromatic esters of thiolsulfonic acid by a chemical method. II. Reaction of aromatic esters of thiolsulfonic acid and of anhydrides of sulfenic acid with chlorine. In German. p. 373. Vol 6, No 3/4, 1955. ACTA CHEMICA. Budapest, Hungary]

So: Eastern European Accession. Vol 5, No 4, April 1956

KARFOV, Remir Nikolayevich; MASLENOK, Boris Arkad'yevich; TSYGANKO, Oleg Leonidovich; BESKURNIKOV, A.I., inzh., retsenzent; SULOYEV, A.V., kand. tekhn. nauk, retsenzent; AL'KIMOVICH, A.V., nauchn. red.; KIL'VEYN, G.S., red.

[Drives of the control system of power-generating marine nuclear reactors] Privody reguliruiushchikh organov sudovykh atomnykh energeticheskikh reaktorov. Leningrad, Sudostroenie, 1965. 250 p. (MIRA 19:1)

KILYACHIKOV, A. P.

Cand Tech Sci

Dissertation: "Conditions for Employing the Ascending Method of Extracting
the Layers with Low Slope."

27 Oct 49

Moscow Mining Inst
imeni I. V. Stalin

SO Vecheryaya Moskva
Sum 71

KILYACHKOV, A.P., kandidat tekhnicheskikh nauk.

Mining thick, inclined seams in Fushun, China, using hydraulic
filling. Nauch. trudy MGI no.16:115-125 '55 [cover '56].
(China--Hydraulic mining) (MLRA 10:4)

Kilyachkov, A.P.

13. HOW TO CHOOSE THE RIGHT TYPE OF SUPPORT FOR A ROADWAY.
 Kilyachkov, A.P. (Usp. (Constr. Moscow), Apr. 1955, vol. 30, 25-28). A
 formula is given for determining the period of service of a roadway of constant
 length, beyond which the roadway should be supported with some material other
 than timber. This formula, contrary to others proposed in the past, takes
 into consideration the cost of electric current required to conduct air through
 the roadway. This factor considerably affects the results of the
 calculation. The difference is governed by the coefficients of resistance of
 timber-supported roadways and roadways supported with metal or concrete, as
 well as by the quantity of ventilation air. The calculated results are plotted
 as a graph, the period of service of the roadway being plotted on the abscissa
 and the costs of heading, maintenance and ventilation on the ordinate. The
 abscissa of the point of intersection of the two curves represents the optimum
 period of service beyond which it is economically worth while to use supports
 other than timber. (L.)

N.C.S.

KILYACHKOV, A.P., kandidat tekhnicheskikh nauk

Determining the cost of vertical shaft sinking. Ugol' 30 no.10:
16-19 0 '55. (MIRA 8:12)

1. Moskovskiy gornyy institut imeni Stalina
(Shaft sinking--Accounting)

1.11.1957, D.F.

SHEYMAN, Yuliy Genrikhovich, MYAN, Vladimir Mikheylovich; ~~KILYACHKOV, A.P.~~
otvetstvennyy redaktor; SHUSHKOVSKAYA, Ye.L., redaktor izdatel'stva;
NADZINSKAYA, A.A., tekhnicheskiy redaktor

[Mining problems; opening and systems of working coal fields]
Zadachnik po gornomu delu; vskrytie i sistemy razrabotki ugol'nykh
mestorozhdenii. Moskva, Ugletekhizdat, 1957. 183 p. (MLRA 10:9)
(Coal mines and mining)

KILYACHKOV, Anatoliy Petrovich; VOSTROV, I.D., otvetstvennyy redaktor;
SHUSHKOVSKAYA, Ye.L., redaktor izdatel'stva; VINOGRADOVA, G.V.,
redaktor izdatel'stva; ZAZUL'SKAYA, V.F., tekhnicheskii redaktor

[Opening and systems of working coal deposits] Vskrytie i sistemy
razrabotki ugol'nykh mestorozhdenii. Moskva, Ugletekhizdat, 1957.
391 p. (MLRA 10:9)

(Coal mines and mining)

KILYACHKOV NP
SONIN, S.D., prof.; SELETSKIY, R.A., dots., kand.tekhn.nauk; KILYACHKOV,
A.P., dots., kand.tekhn.nauk; CHERNYAK, I.L., gornyy inzh.

Analysis of certain basic factors hampering the growth of labor
productivity in Donets Basin mines. Ugol' 32 no.12:9-13 D '57.

(MIRA 11:1)

(Donets Basin--Coal mines and mining)

KILYACHKOV, Anatoliy Petrovich.; SHUSHKOVSKAYA, Ye.L., red. izd-va.;
VINOGRADOVA, G.V., red. izd-va.; ALADOVA, Ye. I., tekhn. red.;
LOMILINA, L.N., tekhn. red.

[Opening coal deposits] Vskrytie ugol'nykh mestorozhdenii. Moskva,
Ugletekhizdat, 1958. 56 p. (MIRA 11:12)
(Coal mines and mining)

VOROB'YEV, Boris Mikhaylovich, BOBYLEV, Aleksandr Petrovich, KILYACHKOV, A.P.
otv.red.; SHUSHKOVSKAYA, Ye.L. red.; VINOGRADOVA, G.V., red.;
IL'INSKAYA, G.M., tekhn.red.; TERPIGOREV, A.M., red.

[Fundamentals of mining] Osnovy gornogo dela. Pod obshchei red.
A.M. Ternigoreva. Moskva, Ugletekhizdat, 1958. 320 p. (MIRA 11:9)
(Mining geology)
(Mining engineering)

SELETSKIY, R.A.; Kilyachkov, A.P.

Comparing the panel- and modified lonwall development systems
for single flat seams. Ugol' Ukr. 4 no.1:36-39 Ja '60.
(Coal mines and mining)

KILYACHKOV, Anatoliy Petrovich; BOKIY, B.V., prof.; SHUSHKOVSKAYA,
Ye.L., otv.red.; VINOGRADOVA, G.V., red.izd-va; SABITOV, A.,
tekhn.red.

[Opening and mining systems for coal deposits] Vskrytie i
sistemy razrabotki ugol'nykh mestorozhdenii. Izd.2., perer.
i dop. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu
delu, 1960. 514 p. (MIRA 14:1)
(Coal mines and mining)

KILYACHKOV, A.P.; OGINSKIY, Ye.S.

Relation between the rate of advance and the miner's labor productivity in the face. Ugol' 36 no.7:35-38 J1 '61. (MIRA 15:2)
(Coal mines and mining--Labor productivity)

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